

HMEE Type III Market Survey

The Army intends to rapidly procure an interim vehicle to replace the Small Emplacement Excavator (SEE) in units supporting Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF) and the Army Transformation Plan. This vehicle will be based on the requirement for the High Mobility Engineer Excavator (HMEE) but will not have the self-deployability (i.e. speed) that the current HMEE requirement calls for. In lieu of the self-deployability this vehicle will be transported intra-theater by trucks and trailers that are organic to the receiving Engineer units. Since this vehicle will be based on the HMEE requirement it will be considered a variant and will be designated the Type III (the Type I and II are already described in the current requirement document). An addendum to the HMEE requirement is being prepared to add the Type III but is not available at this time. A Purchase Description describing the performance requirements of the HMEE Type III is also being developed and may be posted separately if available prior to release of the RFP.

To meet this requirement for the HMEE Type III the Army anticipates procuring a commercial backhoe loader that meets or exceeds the following basic requirements shown in A. below. In addition to the basic requirements there are military unique requirements which must be met, detailed in B. below, and military unique requirements, detailed in C. below, which are desired at this time:

A. Performance

1. Excavate $\frac{1}{4}$ cubic yard of soil per cycle (required); $\frac{1}{2}$ cubic yard of soil per cycle (desired).
2. Excavate in undisturbed hard, medium and soft soils to an 8 ft depth (required); a 12 ft depth (desired).
3. Lift and load 1 cubic yard of material per load (required); 2.5 cubic yard per load (desired).
4. Lift/load to a height of 80" (FMTV 5-ton Dump) (required); to a height of 114" (20 ton/M917 Dump) (desired).
5. Be compatible with various attachments such as:
 - a) Articulating forklift that lifts 4000 lb (required); 6000 lb (desired).
 - b) 4 in 1 multipurpose (bucket, clamshell, blade and lift capability) utility bucket with $\frac{3}{4}$ cubic yard capacity (required); 1 cubic yard capacity (desired).
 - c) Earth auger with 12" and 24" bits (required); 36" bits (desired) that can dig to a depth of 8 ft.
 - d) Rotary sweeper capable of sweeping a path as wide as the vehicle.
 - e) Tamper/compactor capable of providing compaction support for small areas (approximate plate size 17" x 20")
 - f) Rock/pavement breaker impact tool capable of using a variety of bits (moil point, 3.5" spade bit, and 5.5" spade bit).
6. Be able to change attachments in 30 minutes or less (required); 10 minutes or less (desired)
7. Driveline shall have the following features:
 - a) Diesel engine

- b) Automatic/powershift transmission
- c) Minimum forward speed 20 MPH
- d) All axles powered

B. Military unique requirements which must be met:

- 1. Transportable on C-130 aircraft (primary restriction is 102" total height).
- 2. If the vehicle height must be reduced for transport it must be accomplished in 60 minutes or less with on-board tools.
- 3. Have lift and tiedown provisions meeting the requirements of MIL-STD-209 (current revision is "J").
- 4. A NATO slave receptacle (24VDC).
- 5. A rifle rack in the cab of the vehicle.
- 6. Painted in 383 Green lusterless paint (contractor commercial paint acceptable).

C. Military unique requirements which are desired to be met:

- 1. Capable of being flat-towed at 25 mph or greater (all wheels on ground).
- 2. Forging one meter of water without preparation.
- 3. Painted with Chemical Agent Resistant Coating (CARC) in 383 Green.
- 4. Blackout lights that meet the following military standards.
 - a) One left front light conforming to MS51318.
 - b) Two front marker lights conforming to MS52126.
 - c) Two rear stop/taillights conforming to MS52125.

Please provide an estimated delivery time, after contract award, for one to four vehicles that meet the following requirements:

- 1. Meeting the requirements of A above
- 2. Meeting the requirements of A and B above
- 3. Meeting the requirements of A, B, and C above (If one or more requirements in C cannot be met list those that can).

Additionally, please provide either specific performance characteristics of your standard commercial product or an indication of whether your standard commercial product can meet or exceed the "required" and/or "desired" performance in A above.

Based on the current operating environment in Southwest Asia, there may be a need for a certain quantity of HMEE Type III that need to be armored. We anticipate including a requirement for a joint Government/Contractor feasibility study to investigate the integration of armor for operator protection and its impact on vehicle configuration and performance. Will your vehicle be able to accommodate up to 4,000 additional pounds without significant degradation of performance or significant configuration changes? Would you be willing to assist the Government in this feasibility study?

In addition to the above information please fill in the attached questionnaire.

MARKET INVESTIGATION QUESTIONNAIRE

The following questionnaire is intended to help the Government determine the suitability of your equipment to satisfy the US Army requirements for a High Mobility Engineer Excavator (HMEE) Type III. The HMEE Type III will be an existing commercially available (marketed) backhoe loader with some military modifications. This new vehicle is intended to replace a portion of the Army's current fleet of Small Emplacement Excavator (SEE). Please see the performance requirements above.

Please answer all questions applicable to your product. Any supplemental information concerning the performance, human factors engineering, safety, reliability etc. for your product or any other literature concerning your company's warranty program, production longevity, and reputation would be useful in this survey.

A. GENERAL

1. Manufacturer

a) Name: _____

b) Mailing Address: _____

c) Do you have any experience with Military contracts and the associated unique requirements such as military tiedowns, black-out lights, use of military fuels (JP-8) and lubricants? Yes ____ No ____

Comments:

d) Plant location where backhoe loaders are produced:

2. Personnel responding to Questionnaire:

a) Name: _____

b) Title: _____

c) Company Responsibility: _____

d) Telephone/Fax Numbers: _____

e) E-mail address: _____

3. Backhoe Loader Description (Model No.): _____

4. Physical Characteristics:

a) Weight (pounds)

(1) Tare _____

(2) Gross _____

b) Dimensions (during vehicle travel/operation)

(1) Overall Height: _____

(2) Overall Length: _____

(3) Overall width: _____

(4) Minimum Ground Clearance: _____

(5) Curb Clearance: _____

(6) Wheel Base: _____

(7) Maximum Travel Speed: _____

(8) Minimum Turning Radius: _____

c) Vehicle Cab

(1) Is a fully enclosed cab provided for this vehicle? Yes ___ No ___

(2) Roll over Protection System (ROPS) integral to cab? Yes ___ No ___

(3) Provided with Heater and Defroster? Yes ___ No ___

(4) Provided with Air Conditioning (standard)? Yes ___ No ___

(5) Provided with Air Conditioning (optional)? Yes ___ No ___

(6) Equipped with fully adjustable suspension type seat? Yes ___ No ___

(7) Seatbelt provided for seat? Yes ___ No ___

(8) Is a vandalism protection kit available? Yes ___ No ___

d) Is a toolbox(es) provided on the vehicle? Yes ____ No ____

If Yes, what are the internal dimensions and location(s)?

e) Is there space available to add additional enclosed storage on the vehicle?
Yes ____ No ____ If no, what would be the impact to cost or schedule for
adding another storage (i.e., tool) box?

5. Performance Considerations:

a) Can the vehicle be operated on JP-8 fuel? Yes ____ No ____

b) If it can be operated on JP-8 describe any degradation in performance:

c) Are there any problems associated with using military lubricants in the engine,
transmission, or hydraulic system?

d) Does the engine in your vehicle meet EPA Tier III emissions standards?
Yes ____ No ____ If No, when will it meet Tier III? _____

e) Due to concerns with Tier III compliant engines operating on JP-8 fuel the
Government may pursue a waiver to continue using Tier II compliant engines.
Will a Tier II compliant engine continue to be produced for at least the next
five years (i.e., for non US markets)? Yes ____ No ____

f) Can the vehicle be operated at +120 degrees Fahrenheit ambient
temperature without additional cooling needs for the engine, hydraulics or any
other systems?

B. PRODUCTION/QUALITY

1. Production History

a) How long has this make and model been in production?

b) When was the last time this model underwent a product upgrade?

c) Is there a product upgrade planned in the next five years? Yes ____ No ____
If yes, when? Explain changes planned:

d) How many units have been in production in the current configuration?

2. Availability

a) What is the current monthly rate of production for the Backhoe Loader identified herein? _____

b) What is the maximum production capability per month on one shift, eight hour, five day schedule in your plant? _____

c) What is the minimum production rate necessary to sustain the production line? _____

d) Would the Army vehicles be built on the same production line as those sold commercially? Yes ____ No ____

e) How would you plan to integrate military unique requirements into your commercial production (i.e., on the current assembly line or off line)?

3. Quality Control

a) Is your quality control plan ISO certified? Yes ____ No _____. If yes, which level?

C. RELIABILITY CONSIDERATIONS

For the purpose of responding to the following reliability questions, reliability is defined in terms of meantime between hardware failure (MTBF) where a hardware failure is any malfunction, which precludes the Backhoe Loader from performing mission essential functions. You are encouraged to provide data on additional pages

and are not limited to the space below. Additionally, you are encouraged to submit test data or reports to substantiate your information provided below.

1. Does your company have reliability design goals for your equipment?
Yes ____ No ____ If yes, do you track the reliability based on feedback from customers to verify the fielded product meets those goals? Yes ____ No ____
2. How does your company calculate reliability?

3. When calculating reliability what constitutes a failure?

4. Assuming reliability data is available for the proposed backhoe loader, as a part of the source selection process would your company permit a small contingent of Government employees to view the reliability data to establish if it meets a threshold requirement? Yes ____ No ____
Please note that data reviewed by the Government would not be released outside of the Government.
5. In order to review the reliability data what restrictions and/or arrangements would have to be made in order to view it? (e.g., non-disclosure agreement, view at company facility, etc.)

6. What testing has your company performed to verify the design has met its performance and reliability goals?

7. Could this test data be made available during the source selection process for review by the government test representatives? Yes ____ No ____ The intent would be to determine what Government testing could be waived should your vehicle be selected.
8. What impact is there on reliability when attachments such as forks, sweepers, augers etc. are used on the vehicle?

9. Does your company offer a warranty to your commercial customers? Yes ____
No ____ If yes, how long is it? _____

10. If your company offers a warranty and it is in months/years only, would your company be willing to provide that same warranty, at no additional cost to the government, in terms of operating hours? Yes ____ No ____ Typically the Government does not use its equipment as frequently as most commercial users.

D. SAFETY

1. Design Features

a) List the major safety features designed into the Backhoe Loader.

b) Are there any unique recommended precautionary procedures to be used in operating or maintaining this equipment? Yes ____ No ____ If yes, explain.

2. Noise Level

a) What is the maximum noise level (decibels, A weighted) in the area of the operator? _____

b) What is the maximum noise level (decibels, A weighted) in the surrounding area at ground level? _____

c) Do you offer optional noise suppression kits? Yes ____ No ____.

d) At what distance from the loader can 85 decibels or less be achieved?

E. HUMAN FACTORS ENGINEERING

1. Design Features

- a) Is the operator's station layout and control mechanism designed in accordance with governing U.S. Industry standards for this type of equipment? Yes _____ No _____. List major differences and explanation for those differences. List industry standards to which it is designed.

- b) Has the proposed backhoe loader been tested for whole body vibration at the operator's station in accordance with SAE J1013? Yes ____ No ____ If yes, did it meet the standard? Yes ____ No ____

- c) Are any means provided to reduce the effect of whole body vibration to the operator? Yes ____ No _____. If yes, explain.

2. Operator / Maintainer

- a) Does operation or maintenance of this vehicle call for arm / leg reach, clearance or strength requirements which will present problems to the 5th percentile female soldier or the 95th percentile male soldier as defined in SAE J925? Yes ____ No _____. If yes, explain.

- b) Is visibility from the operator's station adequate to accommodate the operator personnel defined in question 2a? Yes ____ No _____. If no, explain the nature and severity of the problem.

- c) Is the electrical system 12 or 24 volts? If 12 volts is a 24 volt system available?

- d) Has your company incorporated a NATO Slave receptacle onto any of your vehicles? Yes ____ No ____

- e) What lights come as standard equipment on your Backhoe Loader? Will operating the vehicle in a dark / night environment require additional or special flood lighting? Yes ____ No _____. If yes, define the additional lights and mounting locations.

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- f) During the operation of this Backhoe Loader, is the operator exposed to any fumes or odors? Yes ____ No _____. If yes, explain the nature and the severity of the situation.
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F. LOGISTICS SUPPORT

1. Documentation

- a) What type of documentation is provided with this Backhoe Loader(s)?

- | | |
|--|------------------|
| (1) Operator's Manual | Yes ____ No ____ |
| (2) Maintenance Manual | Yes ____ No ____ |
| (3) Trouble Shooting Instructions | Yes ____ No ____ |
| (4) Repair / Spare Parts List | Yes ____ No ____ |
| (5) Illustrated Parts Breakdown | Yes ____ No ____ |
| (6) Required Tool List | Yes ____ No ____ |
| (7) Training Manual | Yes ____ No ____ |
| (8) Schematics of fuel, electrical and Hydraulic systems | Yes ____ No ____ |

- b) Would government qualified operators and maintainers of this equipment require special training to operate or maintain these vehicles?
Yes ____ No _____. If yes, explain the nature and extent of training required.
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- c) Are complete instructions for transportability, i.e. tying down or disassembly of the vehicle (if required) provided in the operator's manual or provided in a manual supplement? Yes ____ No ____.

- d) Do you have experience in, and the capability to produce Electronic Technical Manuals (ETM) or Interactive Electronic Technical Manuals (IETM)?
Yes ____ No ____.

2. Parts / Supplies

- a) Is your company experienced in the Government provisioning process (i.e., assigning a National Stock Number)? Yes ____ No ____ If yes, describe your experience in provisioning.

- b) Approximately how many parts used on this backhoe loader have already been provisioned by the Government 0 ____ 1-50 ____ 51-150 ____
151-500 ____ 501+ ____

- c) For parts that are not provisioned, is your company willing to provide the data necessary to support provisioning (e.g., simple drawing, data sheet, catalog page)? Yes ____ No ____

- d) Can you give an estimate of how long it would take to provide the government the data on all the parts on the Backhoe Loader that require provisioning?
Yes ____ No ____ If yes, how long would it take?

G. TRANSPORTABILITY

1. Has your company developed lift and tiedown provision in accordance with MIL_STD-209? Yes ____ No ____
2. Were the lift and tiedown provisions successfully tested by a Government agency? Yes ____ No ____
3. Can the Backhoe Loader be transported by rail without special routing?
Yes ____ No ____.
4. Considering the different modes of transportation (highway, rail, water and air) is any disassembly of the vehicle necessary for transportation? Yes ____ No ____
If yes, what needs to be removed?

5. Is the cab removable for transport? Yes ____ No ____ If yes, identify what the requirements are for manpower, time, tools and equipment to remove.

6. Does your company have any experience with meeting the transportability requirements of the C-130 aircraft? Yes ____ No ____

H. ATTACHMENTS

1. Can the Backhoe Loader be equipped for operation with commercially available attachments such as forks, augers, sweepers, etc.? Yes ____ No ____ . If yes, please describe in detail the modifications to your standard commercial product that must be made to accept these attachments.

2. Are the commercially available attachments sold direct by your company or are they provided by another manufacturer?

3. Provide technical information describing the attachments and quantity sold.

I. OPTIONS

Please provide commercial literature which identifies your standard product and also identify ALL options which are normally available on your Backhoe Loaders as customer selected features or equipment. If you have provided features as special orders, which you do not have listed as options on your price lists or literature, please identify them and describe the modifications to your Backhoe Loaders.

J. CONTRACT/PRICING

The government is considering using a firm-fixed-price 5 year requirements type contract, with 5 one-year options. Each option would be fixed price with an economic price adjustment. Please review the attached draft clause ("PROPOSED Contract

Clause for Economic Price Adjustment With Ceiling”) and attached spreadsheet that helps illustrate how the clause is intended to work.

1. Are you willing to accept a long term contract as described above with this clause? Yes ____ No ____ Do you have any recommended changes to the clause?

2. Would you be willing to provide commercial sales information so that we can verify: a) the commercial catalog price, and b) that we are getting the most favored customer price throughout the term of the contract ? Yes ____ No ____
3. Please provide your commercial catalog price information for the model(s) you would propose and any significant options recommended. Catalog prices are preferred. If applicable please identify any standard discount given to Government agencies.

a) Base model \$ _____

b) Options (list individually)

c) Government discount: _____ %

PROPOSED Contract Clause for
Economic Price Adjustment With Ceiling

1. By signing its proposal, the Contractor warrants that the supplies identified in Attachment X in the Schedule are, except for modifications required by the contract specifications, supplies for which it has an established price. The term "established price" means a price that
 - (a) is an established catalog or market price for a commercial item sold in substantial quantities to the general public, and
 - (b) is the net price after applying any standard trade discounts offered by the Contractor, and
 - (c) is one for which a current published catalog or price list is maintained by the contractor.
2. By signing its proposal, the Contractor further warrants that, as of the date of this contract, any difference between the unit prices stated in the contract for these line items and the Contractor's established prices for like quantities of the nearest commercial equivalents are due to compliance with contract specifications and with any contract requirements for preservation, packaging, and packing beyond standard commercial practice.
3. In this contract, the discount rate applicable to the contractor's catalog or list price is _____% *[offeror insert proposed discount rate.]* This pricing relationship shall be maintained throughout the contract period, except as provided under paragraph 9 below.
4. This contract is Firm-Fixed-Priced (FFP) for the first five ordering years. For these first five years, the prices cannot be changed due to a model change or the military modifications' impact to that model change. If the government changes the military modifications required by the Purchase Description at any time over the life of the contract, the impact of those changes will be separately negotiated.
5. After the first five years, this contract is Fixed Price With Economic Price Adjustment (FP w/EPA). Price adjustments shall be made once a year after the first five years, and shall include decreases as well as increases. The price adjustments shall be negotiated prior to the beginning of the next ordering period. The contractor shall submit its proposal containing all information below, 60 days prior to the beginning of the next ordering period. Each year's proposal shall contain a proposed FFP for the following year. If there is no model change priced into said "following model year", the ceiling price in Attachment X shall be the maximum FFP for that year and shall include the military modifications. Such following year's ceiling price shall not apply if a model change is priced into that year. Both the model change and the application of military modifications will be negotiated separately. When a year's ceiling price is converted to FFP, the ceiling prices for all years beyond that FFP year will be re-established (i.e. Attachment X shall be revised) based on the yearly ceiling price percentages in paragraph 6 below. The prices shall remain valid whether the Government orders

vehicles in any particular ordering period or not. The following data shall be submitted with a request for a price change:

- (a) A copy of the updated published catalog or price list,
- (b) A copy of the commercial literature specification sheet for the item if different from the previous submittal,
- (c) A copy of the commercial catalog or price list showing the price change and the effective date for commercial customers,
- (d) Discounts, schedule, and marketing data regarding the contractor's commercial pricing practice relating to the reissued or modified catalog/price list, or a certification that no change has occurred in that data since the completion of the initial or most recent subsequent submission, whichever is applicable, and
- (e) Documentation supporting the justification for the price change.
- (f) The proposed price for each military modification, and data to support why each of these prices is reasonable.

Note: In evaluating the contractor's proposal to convert any given year's ceiling price to a FFP, the Government reserves the right to make a site visit to the Contractor's location, to view commercial sales invoices for these loader models, for the prior year. This would allow the Government to verify actual selling prices (and discounts granted) to commercial customers, under similar terms and conditions.

6. The ceiling percentages for each of the years after the FFP period ends are shown on Attachment X. These yearly percentages shall not change through the life of the contract.

7. The changed contract unit price shall not apply to quantities ordered under delivery orders issued prior to the ordering period that reflects the new unit price.

8. No modification increasing a contract unit price shall be executed under this contract until the Contracting Officer verifies the increase in the applicable established price.

9. In response to a submittal under paragraph 5 above, the Government reserves the right to exercise one of the following options:

- (a) Accept the contractor's price change as requested when all conditions above are met,
- (b) Negotiate more favorable discounts from the new commercial prices, and/or more favorable prices for military modifications, when the total change requested is not favorable, or

If neither of these two options is acceptable, the parties may mutually agree to end the contract. In this case, the government reserves the right to re-solicit to fill its requirements.

10. If a model change necessitates additional Government testing, the Government may order test vehicles in one ordering period, and at the same time, order production vehicles at the unit ceiling price for the next ordering period, if the additional Government testing will not be completed until the next ordering period.

11. The unit price for any units ordered at ceiling price shall be subsequently adjusted to the firm-fixed price for that ordering period, once the firm-fixed price is established.

Example of How Ceiling Prices Will be Revised When a Given Ordering Year's Prices are

Revised and Converted to Firm-Fixed Price

Example Illustrated Below: In June 2010, Year 6 Firm-Fixed Prices Are Agreed-To, at \$1,000 and \$50 as shown below. (Previous Ceiling Prices for Year 6 were \$1,040 and \$52 respectively.)

Attachment X

Unit Ceiling Prices and Maximum Percentage Increases

Date: Jun 3, 2010

Modification

No:

(if applicable) P000XX

HMME Type III

Ordering Year	Price Excluding Military Modifications		Military Modifications		Total
	Maximum Increase vs. Prior Year Fixed Price	Ceiling Price	Maximum Increase vs. Prior Year Fixed Price	Ceiling Price	Ceiling Price
5 *		N/A		N/A	
6 (FFP)		\$ 1,000		\$ 50	\$ 1,050
7	7.00%	\$ 1,070	7.00%	\$ 54	\$ 1,124
8	7.00%	\$ 1,145	7.00%	\$ 58	\$ 1,203
9	7.00%	\$ 1,225	7.00%	\$ 62	\$ 1,287
10	7.00%	\$ 1,311	7.00%	\$ 66	\$ 1,377

Columns B and D include contractor's initially proposed yearly percentages, which do not change through the life of the contract.

Column C, E and F amounts for years 6 through 10 will be updated, as appropriate, per the Economic

Price Adjustment Clause in the contract.

* At time of initial award, year 5 prices are firm-fixed prices (FFPs), not ceiling prices.